

In the Claims

Please cancel Claim 15.

Please amend Claims 2-11, 16, and 18-19. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i-ii).

2. (Twice Amended) The modulator of Claim 16 wherein the solid state electro-optic material comprises a ceramic material.
3. (Twice Amended) The modulator of Claim 16 wherein the solid state electro-optic material comprises PLZT.
4. (Twice Amended) The modulator of Claim 16 wherein the pixel circuits comprise an array of transistors formed on a silicon substrate.
5. (Twice Amended) The modulator of Claim 16 wherein the electro-optic material comprises a thin film layer having a thickness of 2000 nm or less.
6. (Twice Amended) The modulator of Claim 16 wherein the electro-optic material comprises a plurality of layers.
7. (Twice Amended) The modulator of Claim 16 wherein each electrode comprises an electrically conductive layer that contacts a dielectric layer.
8. (Twice Amended) The modulator of Claim 16 wherein the semiconductor substrate comprises a CMOS integrated circuit.
9. (Twice Amended) The modulator of Claim 16 further comprising a light source and an optical coupler.

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cond 10. (Twice Amended) The modulator of Claim 16 further comprising a memory circuit co-located with each pixel.

11. (Twice Amended) The modulator of Claim 16 wherein each pixel circuit comprises a random access memory.

B2 16. (Twice Amended) A spatial light modulator comprising:

an array of pixels formed on a semiconductor substrate, each pixel including a solid state electro-optic material positioned between a first electrode and a second electrode;

a first layer of dielectric material underneath the electro-optic material and a second layer of dielectric material above the electro-optic material;

a first mirror underneath the electro-optic material and a second mirror above the electro-optic material forming a cavity; and

an array of pixel circuits formed with the semiconductor substrate, each pixel being connected to a pixel circuit.

B3 18. (Twice Amended) The modulator of Claim 16 wherein the first and second electrodes comprise an optically transmissive conductive material.

19. (Twice Amended) The modulator of Claim 16 further comprising a copper interconnect extending from each pixel mesa along a mesa sidewall to a circuit contact of a pixel circuit.